

FORM PTO-1449  <b>INFORMATION DISCLOSURE STATEMENT</b>	ATTY. DOCKET NO. 0942.5040001	APPLICATION NO. 09/845,157
	APPLICANT Smith <i>et al.</i>	
	FILING DATE May 1, 2001	GROUP 1623

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA1	5,244,797	09/14/1993	Kotewicz <i>et al.</i>	435	194	03/18/1991
	AB1	B1 5,244,797	08/25/1998	Kotewicz <i>et al.</i>	435	194	03/18/1991
	AC1	5,405,776	04/11/1995	Kotewicz <i>et al.</i>	435	252.33	01/24/1992
	AD1	B1 5,405,776	10/01/1996	Kotewicz <i>et al.</i>	435	194	01/24/1992
	AE1	5,668,005	09/16/1997	Kotewicz <i>et al.</i>	435	194	03/12/1996
	AF1	6,063,608	05/16/2000	Kotewicz <i>et al.</i>	435	194	02/10/1997
	AG1	6,136,582	10/24/2000	Gao <i>et al.</i>	435	194	01/20/1998
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AI1	WO 98/47912	10/29/1998	WIPO			Yes No
	AJ1	WO 99/10366	03/04/1999	WIPO			Yes No
	AK						Yes No

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	AL	1	Arion, D., <i>et al.</i> , "The K65R Mutation Confers Increased DNA Polymerase Processivity to HIV-1 Reverse Transcriptase," <i>J. Biol. Chem.</i> 271:19860-19864, American Society for Biochemistry and Molecular Biology (1996)
	AM	1	Bakhanashvili, M., and Hizi, A., "The fidelity of the reverse transcriptases of human immunodeficiency viruses and murine leukemia virus, exhibited by the mispair extension frequencies, is sequence dependent and enzyme related," <i>FEBS</i> 319:201-205, Elsevier Science Publishers B.V. (1993)
	AN	1	Bakhanashvili, M., and Hizi, A., "A possible role for cysteine residues in the fidelity of DNA synthesis exhibited by the reverse transcriptases of human immunodeficiency viruses type 1 and type 2," <i>FEBS</i> 304:289-293, Elsevier Science Publishers B.V. (1992)
	AO	1	Bakhanashvili, M., <i>et al.</i> , "Mutational studies of human immunodeficiency virus type 1 reverse transcriptase: the involvement of residues 183 and 184 in the fidelity of DNA synthesis," <i>FEBS Lett.</i> 391:257-262, Elsevier Science Publishers B.V. (1996)
	AP	1	Bakhanashvili, M., and Hizi, A., "Fidelity of the RNA-Dependent DNA Synthesis Exhibited by the Reverse Transcriptases of Human Immunodeficiency Virus Types 1 and 2 and of Murine Leukemia Virus: Mismatch Extension Frequencies," <i>Biochem.</i> 31:9393-9398, American Chemical Society (1992)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AL	2	Barnes, W.M., "The fidelity of <i>Taq</i> polymerase catalyzing PCR is improved by an N-terminal deletion," <i>Gene</i> 112:29-35, Elsevier Science Publishers B.V. (1992)
	AM	2	Basu, S., <i>et al.</i> , "Sulphydryl groups in the template-primer-binding domain of murine leukemia virus reverse transcriptase," <i>Biochem. J.</i> 296:577-583, The Chemical Society, London (1993)
	AN	2	Bebenek, K., <i>et al.</i> , "Reduced Frameshift Fidelity and Processivity of HIV-1 Reverse Transcriptase Mutants Containing Alanine Substitutions in Helix H of the Thumb Subdomain," <i>J. Biol. Chem.</i> 270:19516-19523, American Society for Biochemistry and Molecular Biology (1995)
	AO	2	Bebenek, K., <i>et al.</i> , "The Fidelity of DNA Synthesis Catalyzed by Derivatives of <i>Escherichia coli</i> DNA Polymerase I," <i>J. Biol. Chem.</i> 265:13878-13887, The American Society for Biochemistry and Molecular Biology (1990)
	AP	2	Ben-Artzi, H., <i>et al.</i> , "Characterization of the double stranded RNA dependent RNase activity associated with recombinant reverse transcriptases," <i>Nucleic Acids Res.</i> 20:5115-5118, Oxford University Press (1992)

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	AL	<u>3</u>	Berger, S.L., <i>et al.</i> , "Reverse Transcriptase and Its Associated Ribonuclease H: Interplay of Two Enzyme Activities Controls the Yield of Single-Stranded Complementary Deoxyribonucleic Acid," <i>Biochemistry</i> 22:2365-2372, The American Chemical Society (1983)
	AM	<u>3</u>	Blain, S.W., and Goff, S.P., "Effects on DNA Synthesis and Translocation Caused by Mutations in the RNase H Domain of Moloney Murine Leukemia Virus Reverse Transcriptase," <i>J. Virol.</i> 69:4440-4452, The American Society for Microbiology (1995)
	AN	<u>3</u>	Caliendo, A.M., <i>et al.</i> , "Effects of Zidovudine-Selected Human Immunodeficiency Virus Type 1 Reverse Transcriptase Amino Acid Substitutions on Processive DNA Synthesis and Viral Replication," <i>J. Virol.</i> 70:2146-2153, The American Society for Microbiology (1996)
	AO	<u>3</u>	Carroll, S.S., <i>et al.</i> , "A Mutant of DNA Polymerase I (Klenow Fragment) with Reduced Fidelity," <i>Biochem.</i> 30:804-813, American Chemical Society (1991)
	AP	<u>3</u>	Carter, P. and Wells, J.A., "Engineering Enzyme Specificity by 'Substrate-Assisted Catalysis,'" <i>Science</i> 237:394-399, American Association for the Advancement of Science (1987)

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	AL	<u>4</u>	Chen, Y., and Marion, P.L., "Amino Acids Essential for RNase H Activity of Hepadnaviruses Are Also Required for Efficient Elongation of Minus-Strand Viral DNA," <i>J. Virol.</i> 70:6151-6156, The American Society for Microbiology (1996)
	AM	<u>4</u>	Chowdhury, K., <i>et al.</i> , "Elucidation of the Role of Arg 110 of Murine Leukemia Virus Reverse Transcriptase in the Catalytic Mechanism: Biochemical Characterization of Its Mutant Enzymes," <i>Biochemistry</i> 35:16610-16620, American Chemical Society (1996)
	AN	<u>4</u>	Creighton, S., <i>et al.</i> , "Base Mismatch Extension Kinetics," <i>J. Biol. Chem.</i> 267:2633-2639, American Society for Biochemistry and Molecular Biology (1992)
	AO	<u>4</u>	DeStefano, J.J., <i>et al.</i> , "Parameters that influence processive synthesis and site-specific termination by human immunodeficiency virus reverse transcriptase on RNA and DNA templates," <i>Biochimica et Biophysica Acta</i> 1131:270-280, Elsevier Science Publishers B.V. (1992)
	AP	<u>4</u>	Diaz, L., and DeStefano, J.J., "Strand transfer is enhanced by mismatched nucleotide at the 3' primer terminus: a possible link between HIV reverse transcriptase fidelity and recombination," <i>Nucleic Acids Res.</i> 24:3086-3092, Oxford University Press (1996)

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AL	<u>5</u>	Drosopoulos, W.C., and Prasad, V.R., "Increased Polymerase Fidelity of E89G, a Nucleoside Analog-Resistant Variant of Human Immunodeficiency Virus Type 1 Reverse Transcriptase," <i>J. Virol.</i> 70:4834-4838, The American Society for Microbiology (1996)	
AM	<u>5</u>	Drosopoulos, W.C., and Prasad, V.R., "Increased Misincorporation Fidelity Observed for Nucleoside Analog Resistance Mutations M184V and E89G in Human Immunodeficiency Virus Type 1 Reverse Transcriptase Does Not Correlate with the Overall Error Rate Measured In Vitro," <i>J. Virol.</i> 72:4224-4230, The American Society for Microbiology (1998)	
AN	<u>5</u>	Eckert, K.A., and Kunkel, T.A., "Fidelity of DNA synthesis catalyzed by human DNA polymerase $\alpha$ and HIV-1 reverse transcriptase: effect of reaction pH," <i>Nucleic Acids Res.</i> 21:5212-5220, Oxford University Press (1993)	
AO	<u>5</u>	Eger, B.T., <i>et al.</i> , "Mechanism of DNA Replication Fidelity for Three Mutants of DNA Polymerase I: Klenow fragment KF(exo+), KF(polA5), and KF(exo-)," <i>Biochem.</i> 30:1441-1448, American Chemical Society (1991)	
AP	<u>5</u>	Feng, J.Y., and Anderson, K.S., "Mechanistic Studies Examining the Efficiency and Fidelity of DNA Synthesis by the 3TC-Resistant Mutant (184V) of HIV-1 Reverse Transcriptase," <i>Biochemistry</i> 38:9440-9448, The American Chemical Society (July 1999); Published on the web on June 30, 1999.	

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	AL	6	Finston, W.I. and Champoux, J.J., "RNA-Primed Initiation of Moloney Murine Leukemia Virus Plus Strands by Reverse Transcriptase In Vitro," <i>J. Virology</i> 51:26-33, American Society for Microbiology (1984)
	AM	6	Gao, G., and Goff, S.P., "Replication Defect of Moloney Murine Leukemia Virus with a Mutant Reverse Transcriptase That Can Incorporate Ribonucleotides and Deoxyribonucleotides," <i>J. Virol.</i> 72:5905-5911, The American Society for Microbiology (1998)
	AN	6	Gerard, G.F., <i>et al.</i> , "cDNA Synthesis by Cloned Moloney Murine Leukemia Virus Reverse Transcriptase Lacking RNase H Activity," <i>Focus</i> 11:66-69, Life Technologies, Inc. (1989)
	AO	6	Gerard, G.F., <i>et al.</i> , "Influence on Stability in <i>Escherichia coli</i> of the Carboxy-Terminal Structure of Cloned Moloney Murine Leukemia Virus Reverse Transcriptase," <i>DNA</i> 5:271-279, Mary Ann Liebert, Inc. (1986)
	AP	6	Gerard, G., <i>et al.</i> , "cDNA Synthesis by Moloney Murine Leukemia Virus RNase H-Minus Reverse Transcriptase Possessing Full DNA Polymerase Activity," <i>Focus</i> 14:91-93, Life Technologies, Inc. (1992)

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	AL	<u>I</u>	Gerwin, B.I., <i>et al.</i> , "Mutant of B-Tropic Murine Leukemia Virus Synthesizing an Altered Polymerase Molecule," <i>J. Virology</i> 31:741-751, The American Society for Microbiology (1979)
	AM	<u>I</u>	Goff, S.P., "Retroviral Reverse Transcriptase: Synthesis, Structure, and Function," <i>J. Acquired Immune Deficiency Syndrome</i> 3:817-831, Raven Press (1990)
	AN	<u>I</u>	Goff, S.P. and Lobel, L.I., "Mutants of murine leukemia viruses and retroviral replication," <i>Biochimica et Biophysica Acta</i> . 907:93-123, Elsevier Science Publishers B.V. (1987)
	AO	<u>I</u>	Goobar-Larsson, L., <i>et al.</i> , "Disruption of a Salt Bridge between Asp 488 and Lys 465 in HIV-1 Reverse Transcriptase Alters Its Proteolytic Processing and Polymerase Activity," <i>Virology</i> 196:731-738, Academic Press (1993)
	AP	<u>I</u>	Götte, M., <i>et al.</i> , "The M184V Mutation in the Reverse Transcriptase of Human Immunodeficiency Virus Type 1 Impairs Rescue of Chain-Terminated DNA Synthesis," <i>J. Virol.</i> 74:3579-3585, The American Society for Microbiology (April 2000)

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	AL	<u>8</u>	Guo, J., <i>et al.</i> , "Defects in Primer-Template Binding, Processive DNA Synthesis, and RNase H Activity Associated with Chimeric Reverse Transcriptases Having the Murine Leukemia Virus Polymerase Domain Joined to <i>Escherichia coli</i> RNase H," <i>Biochemistry</i> 34:5018-5029, The American Chemical Society (1995)
	AM	<u>8</u>	Hamburgh, M.E., <i>et al.</i> , "The influence of 3TC-resistance mutations E89G and M184V in the human immunodeficiency virus reverse transcriptase on mispair extension efficiency," <i>Nucleic Acids Res.</i> 26:4389-4394, Oxford University Press (1998)
	AN	<u>8</u>	Hite, J.M., <i>et al.</i> , "Factors affecting fidelity of DNA synthesis during PCR amplification of d(C-A) <sub>n</sub> -d(G-T) <sub>n</sub> microsatellite repeats," <i>Nucleic Acids Res.</i> 24:2429-2434, Oxford University Press (1996)
	AO	<u>8</u>	Hsu, M., <i>et al.</i> , "Higher fidelity of RNA-dependent DNA mispair extension by M184V drug-resistant than wild-type reverse transcriptase of human immunodeficiency virus type 1," <i>Nucleic Acids Research</i> 25:4532-4536, Oxford University Press (1997)
	AP	<u>8</u>	Jin, J., <i>et al.</i> , "Analysis of the Role of Glutamine 190 in the Catalytic Mechanism of Murine Leukemia Virus Reverse Transcriptase," <i>J. Biol. Chem.</i> 274:20861-20868, American Society for Biochemistry and Molecular Biology (July 1999)

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	AL	2	Kaushik, N., <i>et al.</i> , "Role of Glutamine-151 of Human Immunodeficiency Virus Type-1 Reverse Transcriptase in RNA-Directed DNA Synthesis," <i>Biochemistry</i> 36:14430-14438, The American Chemical Society (1997)
	AM	2	Kaushik, N., <i>et al.</i> , "Role of Glutamine 151 of Human Immunodeficiency Virus Type-1 Reverse Transcriptase in Substrate Selection As Assessed by Site-Directed Mutagenesis," <i>Biochemistry</i> 39:2912-2920, The American Chemical Society (March 2000); Published on the web on February 22, 2000.
	AN	2	Kaushik, N., <i>et al.</i> , "Tyrosine 222, a Member of the YXDD Motif of MuLV RT, Is Catalytically Essential and Is a Major Component of the Fidelity Center," <i>Biochemistry</i> 38:2617-2627, The American Chemical Society (March 1999); Published on the web on February 10, 1999.
	AO	2	Kerr, S.G., and Anderson, K.S., "RNA Dependent DNA Replication Fidelity of HIV-1 Reverse Transcriptase: Evidence of Discrimination between DNA and RNA Substrates," <i>Biochemistry</i> 36:14056-14063, The American Chemical Society (1997)
	AP	2	Kim, B., <i>et al.</i> , "Fidelity of Mutant HIV-1 Reverse Transcriptases: Interaction with the Single-Stranded Template Influences the Accuracy of DNA Synthesis," <i>Biochemistry</i> 37:5831-5839, The American Chemical Society (1998); Published on the web on April 9, 1998.

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	AL	<u>10</u>	Kim, B., <i>et al.</i> , "New Human Immunodeficiency Virus, Type 1 Reverse Transcriptase (HIV-1 RT) Mutants with Increased Fidelity of DNA Synthesis," <i>J. Biol. Chem.</i> 274:27666-27673, American Society for Biochemistry and Molecular Biology (September 1999)
	AM	<u>10</u>	Levin, J.G., <i>et al.</i> , "Murine Leukemia Virus Mutant with a Frameshift in the Reverse Transcriptase Coding Region: Implications for <i>pol</i> Gene Structure," <i>J. Virology</i> 51:470-478, American Society for Microbiology (1984)
	AN	<u>10</u>	Lewis, D.A., <i>et al.</i> , "Uniquely Altered DNA Replication Fidelity Conferred by an Amino Acid Change in the Nucleotide Binding Pocket of Human Immunodeficiency Virus Type 1 Reverse Transcriptase," <i>J. Biol. Chem.</i> 274:32924-32930, The American Society for Biochemistry and Molecular Biology (November 1999)
	AO	<u>10</u>	Martin-Hernandez, A.M., <i>et al.</i> , "Human immunodeficiency virus type 1 reverse transcriptase: role of Tyr115 in deoxynucleotide binding and misinsertion fidelity of DNA synthesis," <i>EMBO J.</i> 15:4434-4442, Oxford University Press (1996)
	AP	<u>10</u>	Martin-Hernandez, A.M., <i>et al.</i> , "Mispair extension fidelity of human immunodeficiency virus type 1 reverse transcriptases with amino acid substitutions affecting Tyr115," <i>Nucleic Acids Res.</i> 25:1383-1389, Oxford University Press (1997)

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	AL	<u>11</u>	Messer, L.I., <i>et al.</i> , "Functional Analysis of Reverse Transcription by a Frameshift <i>pol</i> Mutant of Murine Leukemia Virus," <i>Virology</i> 146:146-152, Academic Press, Inc. (1985)
	AM	<u>11</u>	Oude Essink, B.B., <i>et al.</i> , "Increased polymerase fidelity of the 3TC-resistant variants of HIV-1 reverse transcriptase," <i>Nucleic Acids Res.</i> 25:3212-3217, Oxford University Press (1997)
	AN	<u>11</u>	Pandey, V.N., <i>et al.</i> , "Role of Methionine 184 of Human Immunodeficiency Virus Type-1 Reverse Transcriptase in the Polymerase Function and Fidelity of DNA Synthesis," <i>Biochemistry</i> 35:2168-2179, The American Chemical Society (1996)
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FORM PTO-1449

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ATTY. DOCKET NO.  
0942.5040001APPLICATION NO.  
09/845,157APPLICANT  
Smith *et al.*FILING DATE  
May 1, 2001GROUP  
1623

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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	AI						Yes No
	AJ						Yes No
	AK						Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AL	<u>12</u>	Pop, M.P., and Biebricher, C.K., "Kinetic Analysis of Pausing and Fidelity of Human Immunodeficiency Virus Type 1 Reverse Transcription," <i>Biochemistry</i> 35:5054-5062, The American Chemical Society (1996)
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	AM	<u>14</u>	Suzuki, M., <i>et al.</i> , "Fidelity Mutants in <i>Thermus aquaticus</i> DNA Polymerase I," <i>Ninth International Genome Sequencing and Analysis Conference, Hilton Head Island, South Carolina, September 13-16, 1997. Microbial and Comparative Genomics</i> 2:226, Abstract C-30, Mary Ann Liebert, Inc. (1997)
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	AM	<u>15</u>	Co-Pending U.S. Patent Application No. 09/677,574, filed October 3, 2000.
	AN	<u>15</u>	Co-Pending U.S. Patent Application No. 09/808,124, filed March 15, 2001.
	AO	<u>15</u>	Co-Pending U.S. Patent Application No. 09/902,741, filed July 12, 2001.
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